

SOUTHWEST FISHERIES SCIENCE CENTER
SECOND QUARTER REPORT-FY 2002
For the Period January 1 - March 31, 2001

Submitted by: John Hunter, Division Director, Fisheries Resources Division.

Title of Accomplishment or Milestone: Complete data reports for SPAM98 and STAR99.

Current Status: Completed.

Background Information: In 1998 and 1999 the Southwest Fisheries Science Center (SWFSC) conducted multiple-ship surveys (SPAM98 and STAR99) to the eastern tropical Pacific to monitor dolphin stocks and make oceanographic and ecological observations related to those stocks. This survey was in response to the 1997 International Dolphin Conservation Program Act (Public Law 105-42) that directed the National Marine Fisheries Service to determine the impacts that the purse-seine tuna fishery in the eastern tropical Pacific (ETP) may have on depleted dolphin stocks (Gerrodette et al. 1998). As part of the implementation of this act, Congress directed NMFS to conduct ETP dolphin population surveys in 1998, 1999, and 2000. These surveys are essentially a continuation of a series of six surveys conducted in the ETP from 1986 to 1992, that monitored the abundance and distribution of dolphin stocks and, concurrently, the physical and biological variables in their habitat. A primary objective of both survey series was to determine the relationship between environmental variables and population trends in ETP dolphin stocks.

Purpose of Activity: To complete identification of the fish eggs and larvae from Manta and oblique net tows taken on all marine mammal survey cruises to the ETP in 1998 and 1999, to enter this data into the CalCOFI Ichthyoplankton Data Base, edit the data, produce data reports for each survey, and present preliminary results at the academic review of the marine mammal ETP ecology project.

Description of Accomplishment and Significant Results: Sorting of all samples from 693 plankton tows produced a total of 41,414 larvae. A total of 148 larval fish taxonomic categories was identified from the Manta net samples, and a total of 206 categories was identified in the oblique samples. A data base for these identifications was developed, checked, and verified. Manuscripts of data reports were completed for SPAM98 and STAR99 and will be published in the NOAA NMFS Technical Memorandum series. The results of this work were presented at the academic review of the Marine Mammal ETP ecology program.

Significance of Accomplishment: The results of this study are a major contribution to our understanding of inter-annual variation in fish populations of the ETP. Variation in the physical and biotic environment needs to be considered in assessing inter-annual and inter-decadal trends in ETP porpoise stocks. This information is critical to establishing the impact of the tuna fishery on porpoise stocks. Ichthyoplankton surveys are a robust fishery-independent method of assessing variation in fish populations and the information from these surveys are an important element in the overall conclusions derived from the ETP marine mammal surveys.

Problems: None

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